

REMARKS**A. Status of the Drawings**

The Office Action has objected to the drawings, alleging that the drawings do not show the optical path claimed in claims 20 and 24. Operating under this assumption, the Office Action has required corrected drawing sheets which either show the optical path, or cancellation of the portion of claims 20 and 24 that specify the optical path.

In response, Applicant respectfully maintains that the optical paths recited in claims 20 and 24 are, in fact, shown in the drawings, contrary to the allegation of the Office Action. Specifically, the optical path claimed in claim 20 is shown, for example, in Figure 2 of the application, while the optical path claimed in claim 24 is shown in Figure 4 of the application.

B. Status of the Claims and Explanation of the Amendments

Currently, claims 1-27 are pending. Of these claims, claims 1, 2, 4-6, 13-17, and 26 have been rejected under 35 U.S.C. §102(e) for allegedly being anticipated by U.S. Patent Application No. 2002/0039232 to Takeyama (“Takeyama”). Claims 3 and 7-12 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Takeyama, in view of U.S. Patent No. 6,687,057 to Yamazaki (“Yamazaki”). Claims 18-25 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Takeyama, in view of U.S. Application No. 2003/0107816 to Takagi (“Takagi”). Claim 27 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Takeyama, in view of U.S. Patent No. 5,917,662 to Sekita (“Sekita”).

Applicant has amended claims 18, 20, 22, and 24 to include language suggested by the Examiner on page 8 of the previous office action for claiming a sequence of events. No new matter has been added by these amendments.

B. Applicant's Claims Are Not Anticipated by Takeyama

Applicant respectfully traverses the rejection of claims 1, 2, 4-6, 13-17, and 26 for allegedly being anticipated by Takeyama. Briefly, Takeyama fails to teach, disclose, or suggest all of the claim elements in Applicant's claims. Accordingly, the rejection of these claims under 35 U.S.C. §102 should be withdrawn. MPEP §2131.

1. Takeyama Fails to Teach a "First Surface" As Recited In Applicant's Claims

In rejecting Applicant's claims 1, 2, 4-6, 13-17, and 26, the Office Action alleges that Takeyama discloses all of the claims elements of Applicant's independent claim [Office Action, page 3]. In particular, the Office Action asserts that even though surfaces corresponding to 4_1 and 4_4 in Figure 1 are labeled with different reference numbers, they together constitute a single surface because "they appear to be a part of the same continuous curve" [Office Action, page 3].

A closer look at Takeyama indicates otherwise, however. While Takeyama describes prism 4 of Figure 1 using reference numerals 4_1 , 4_2 , 4_3 , 4_4 , and 4_5 , the surfaces corresponding to 4_1 and 4_4 are not considered by Takeyama to be a part of the same surface. This is made explicit in the text of Takeyama's specification, as well as in the numerical example provided on page 8. Takeyama differentiates between surface 4_1 and 4_4 at least in the following ways: (1) by explicitly stating that there five different surfaces for prism 4, including surfaces 4_1

and 4₄; (see paragraph [0126], especially the first sentence); (2) by labeling them differently in Figure 1; (3) by specifying that they are different free curved surfaces, namely FFS[1] and FFS[4], respectively [see paragraph [0129] and the numerical example on page 8 of Takeyama], and (4) by explicitly describing them using different sets of C_j coefficients, thereby indicating that their shapes are mathematically distinct [see Takeyama, page 8].

Because Takeyama itself does not treat the surfaces corresponding to reference numerals 4₁ and 4₄ as the same, the Office Action's statement that these surfaces are the same because they are "a part of the same continuous curve" appears to contradict the very teachings of Takeyama. For at least this reason, Applicant respectfully maintains that surfaces corresponding to 4₁ and 4₄ are not a part of the same surface, and therefore cannot be considered to be a "first surface" as recited in Applicant's claims.

Accordingly, Applicant maintains that Takeyama fails to teach, disclose, or suggest all of the claim elements in Applicant's claims. Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 1, 2, 4-6, 13-17, and 26 under 35 U.S.C. §102(e).

C. Applicant's Claims Are Not Unpatentable Over the Cited References

Applicant respectfully traverses the rejections of claims 3 and 7-12 as allegedly being unpatentable over Takeyama, in view of Yamazaki. Also traversed are the rejection of claims 18-25 over Takeyama, in view of Takagi; and the rejection of claim 27 over Takeyama, in view of Sekita. Briefly, the references, alone or in combination, fail to teach, disclose, or suggest all of the claim elements of Applicant's claims. Accordingly, the rejection of Applicant's claims under 35 U.S.C. §103(a) should be withdrawn. MPEP §2143.

1. The Combination of Takeyama and Yamazaki Does Not Render Applicant's Claims Unpatentable

In rejecting claims 3 and 7-12 over Takeyama, in view of Yamazaki, the Office Action relies on Takeyama for all elements of the claims, except for a reference to the second surface being a diffractive surface (claim 3) and a reference to the symmetry of the diffractive surface (claims 7-12). For these missing elements, the Office Action relies on Yamazaki. Applicant, however, does not see where in Yamazaki there is any teaching, express or otherwise, of a “first surface” as recited in Applicant’s claims. Accordingly, since Takeyama also apparently fails to teach Applicant’s “first surface”, the combination of Takeyama and Yamazaki also fails to teach, disclose, or suggest a “first surface” as recited in Applicant’s claims 3 and 7-12.

For at least this reason, the rejection of claims 3 and 7-12 over these references should be withdrawn. MPEP §2143.

2. The Combination of Takeyama and Takagi Does Not Render Applicant's Claims Unpatentable

In the Office Action’s rejection of claims 18-25 over Takeyama, in view of Takagi, the Office Action relies on Takeyama for all elements of the claims, except for the claimed optical path (claims 18, 20, 22 and 24); and the angle of reflection (claims 19, 21, 23, and 25). For these missing elements, the Office Action relies on Takagi. Applicant, however, does not see where in Takagi there is any teaching, express or otherwise, of a “first surface” as recited in Applicant’s claims. Accordingly, since Takeyama also apparently fails to teach Applicant’s “first surface”, the combination of Takeyama and Takagi also fails to teach, disclose, or suggest a “first surface” as recited in Applicant’s claims 18-25.

For at least this reason, the rejection of claims 18-25 over these references should be withdrawn. MPEP §2143.

3. The Combination of Takeyama and Sekita Does Not Render Applicant's Claim 27 Unpatentable

In its rejection of claim 27, the Office Action relies on Takeyama for all elements, except for a photoelectric device. For this element, the Office Action relies on Sekita. However, Sekita, like Takeyama, does not appear to teach, expressly or otherwise, a "first surface" as recited in Applicant's claim 27. Accordingly, because the combination of references fails to teach, disclose, or suggest all of claim elements in Applicant's claim 27, the rejection of claim 27 under 35 U.S.C. §103(a) should be withdrawn.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

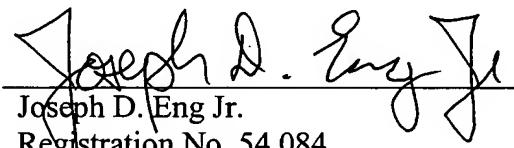
The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 1232-5261. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 1232-5261. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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